

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Original) A robot simulation device, comprising of an input device, a display, a central computer, computing programs, an output device of teaching programs, and following means to simulate whether the robot can transfer an object in a working space where obstacles are located, without any interference in said working space:

(1) a two-dimensional display having coordinate axes,

(2) a means to display said obstacles, said working space, a moving robot and said object transferred by said robot, on said display,

(3) a means to interpolate a path by designating path points of a central point of said moving object,

(4) a means to display a path wherein said object is moved in said working space, and

(5) a means to display an interference region of said path and said obstacles.

2. (Original) A robot simulation device according to claim 1, further comprising: a means of measuring and displaying traveling time of said object and said robot, and a means of displaying a moving picture of said path of said moving object and movable portion of said robot.

3. (Currently Amended) A robot simulation device according to claim ~~1~~ or 2, further comprising, a means of calculating traveling speed of said object and said movable portion of said robot.

4. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 3~~, wherein said two-dimensional display displays a horizontal plane ~~and-or~~ a vertical plane of said working space.

5. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 4~~, wherein said obstacles and said working space are displayed by a polygonal form and / or a circular form.

6. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 5~~, wherein said path of said moving object is calculated by designating a departure point and a destination point of said robot on said display.

7. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 6~~, wherein a route and said path of said moving object is further calculated by designating a departure point and a plurality of destination points of said object on said display.

8. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 7~~, wherein a region where said robot is unable to transfer said object is calculated and displayed by designating a boundary of a movable region of said robot.

9. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 8~~, wherein said output device outputs at least dimensions of said robot, said path of the moving robot, said speed of the robot according to data which is achieved by a simulation.

10. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 9~~, wherein the simulation device further teaches a motion of movable part of the robot.

11. (Currently Amended) A robot simulation device according to ~~any one of claims 1 to 10~~, wherein said robot is a scalar type robot and said object is a sheet like plate.

12. (Canceled)

13. (New) A method in connection with programming of a robot simulation device, which simulates whether a robot can transfer an object in a working space where obstacles are located, without any interference in said working space, comprising:

- (1) displaying a two-dimensional display having coordinate axes,
- (2) displaying said obstacles, said working space, a moving robot and said object transferred by said robot, on a display,
- (3) interpolating a path by designating path points of a central point of said moving object,
- (4) displaying a path wherein said object is moved in said working space,
- (5) displaying an interference region of said path and said obstacles, and
- (6) teaching a motion of movable part of the robot to the robot.

14. (New) The method according to claim 13, further comprising:
measuring and displaying traveling time of said object and said robot, and
displaying a moving picture of said path of said moving object and movable portion of said robot.

15. (New) The method according to claim 14, further comprising:
calculating traveling speed of said object and said movable portion of said robot.

16. (New) The method according to claim 13, further comprising:
displaying a horizontal plane or a vertical plane of said working space on said two-dimensional display.

17. (New) The method according to claim 13, further comprising:
displaying said obstacles and said working space by a polygonal form and / or a circular form.

18. (New) The method according to claim 13, further comprising:
calculating said path of said moving object by designating a departure point and a destination point of said robot on said display.

19. (New) The method according to claim 18, further comprising:
calculating a route and said path of said moving object by designating a departure point
and a plurality of destination points of said object on said display.

20. (New) The method according to claim 13, further comprising:
calculating and displaying a region where said robot is unable to transfer said object by
designating a boundary of a movable region of said robot.

21. (New) The method according to claim 13, further comprising:
outputting at least dimensions of said robot, said path of the moving robot, said speed of
the robot according to data which is achieved by a simulation via said output device.